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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,552	12/05/2001	Gary Jennings	BR8669	7086
27572	7590	05/31/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			SAETHER, FLEMMING	
P.O. BOX 828			ART UNIT	PAPER NUMBER
BLOOMFIELD HILLS, MI 48303			3677	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/004,552	Applicant(s) JENNINGS ET AL.	
	Examiner Flemming Saether	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 08 March 2006.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-9 and 13-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-9 and 13-16 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a) ☐ All b) ☐ Some * c) ☐ None of:

 1. ☐ Certified copies of the priority documents have been received.

 2. ☐ Certified copies of the priority documents have been received in Application No. _____.

 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.
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Claim Rejections - 35 USC § 112

Claims 1-9 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claims, it is unclear what applicant intends to be the radial cross-section and direction because a radius is simply a line extending from the axis which can define an infinite number cross-sections.

Claim Rejections - 35 USC § 103

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as obvious over Smith (EPO 1 030 069). Smith discloses a rivet comprising a mandrel (4) having a frangible portion (not labeled) and a shell (2) having a flange (6) with a first (12) and second (14) sets of indentations along the shell spaced from the flange. As seen in Fig. 2, each of the indentations are arch shaped when viewed in "radial" cross-section and include a surface (16) between the indentations defined by sloping edges with a mid portion there between. Smith discloses the indentation formed by rolling which inherently would localized hardened area but, Smith is silent as to the amount of hardening but, the amount of hardening would have been obvious for optimized manufacture and deformation.

Claims 2, 4-9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 1 above, and further in view of Lacey (US 4,958,971). Lacey teaches a rivet including a third indentation. At the time the

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invention was made, it would have been obvious for one of ordinary skill in the art to provide Smith with a third set of indentations as taught in Lacey in order to better control the deformation characteristics of the rivet for overall superior performance. The specific dimensions would have been recognized depending upon the particular use of the rivet. Also, the rivet of modified Smith would be capable of use in combination with the workpiece components as claimed.

Claims 1-9 and 13-16 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Lacey (US 4,958,971) in view of Gossmann (US 5,469,140). Lacey discloses a rivet comprising a mandrel (13) having a frangible portion (19) and a shell (11) having a flange (16) with a first (27), second (28) and third (29) indentations along the shell spaced from the flange. The indentations have a thickness at least *about* within the claimed range. Lacey discloses the indentations to be arc shaped however they are not non-continuous. Gossmann discloses a rivet having a shell with sets of indentations (11, 12) wherein the sets are non-continuous. At the time the invention was made, it would have been obvious for one of ordinary skill in the art to form the indentations of Lacey in to non-continuous sets as disclosed in Gossmann in order to provide for a higher strength rivet connection. As discussed in Grossmann's Summary of the Invention the non-continuous sets of indentations lead to less material attenuation and thus a stronger rivet connection.

Response to Remarks

Applicant does not address the 112 second paragraph rejection wherein "radial cross-section" is held to be indefinite.

Applicant argues the range added to claim 16 defines over the prior art. In response, the examiner disagrees because the range is relatively large and is even prefaced by "about". The examiner also notes that applicant does not argue that the range is not disclosed by the prior art only that the prior art is silent on the limitation.

Applicant argues that the claimed "crimped" process forms a different final product than either rolled or embossed. In response, the examiner disagrees because the applicant does not provide any supporting evidence. Simply stating that process roll formed leaves an "elliptically formed shell body" is insufficient. Applicant must show a difference on a molecular level because the "elliptically formed shell body" could be avoided by other manufacturing techniques leaving the same final product. Applicant should consider a divisional application of method claims if the novelty is in the process by which the rivet is formed.

The inherency rejection has been dropped because the examiner agrees with applicant that the hardness is not a necessary result.

Finally, in regards to the claims, in particular claim 16, the examiner notes that “arch-shaped” is interpreted to require a curved shape per the dictionary definition and the shape disclosed in the instant invention. Otherwise, the reference to Grossmann may be applied to anticipate at least claim 16.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

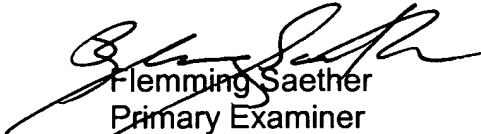
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Flemming Saether whose telephone number is 571-272-7071. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Flemming Saether
Primary Examiner
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